

C-1 AC 44147

REPORT

ON THE

Medical Inspection of School Children

IN THE

COUNTY OF WEST SUSSEX,

1937.

RALPH D. SMEDLEY, M.A., M.D., D.P.H.

The area administered by the West Sussex Education Committee includes the whole of the Administrative County of West Sussex, with the exception of the Borough of Worthing.

The County, which is roughly 30 miles long (East to West) and 20 miles wide, has an area of 620 square miles. The Census population 1931, excluding Worthing, was 171,640. In 1937 the population was estimated to be 194,960.

There are 172 School-departments in the area, and the average number of children on the roll in these Schools for the year ended 31st March, 1937, was 20,561, whilst the average attendance during the same period was 18,308.

The following statement shews the number of Births and the Birth Rates for the years 1924-1937 for the Administrative County of West Sussex, excluding the Borough of Worthing, which has a separate Education Authority :—

YEAR	NO. OF BIRTHS	BIRTH RATE	YEAR	NO. OF BIRTHS	BIRTH RATE
1924	2483	15.6	1931	2598	15.1
1925	2431	15.1	1932	2525	14.1
1926	2509	15.0	1933	2441	13.3
1927	2485	14.5	1934	2599	13.9
1928	2485	14.4	1935	2715	14.2
1929	2425	14.1	1936	2794	14.3
1930	2456	14.3	1937	2919	14.5

1.—STAFF.—As will be seen from the following statement, there have been a number of changes in the Staff during the year, notably the resignation of Dr. W. J. Butcher on account of ill-health, whose resignation, after over 25 years' service, was received with the deepest regret by the Committee, who placed on record an appreciation of his services. The whole-time Dentists were increased to five by the appointment of Mr. A. Topping in April.

WHOLE-TIME STAFF :—

		<i>Other Appointments held.</i>
School Medical Officer	Dr. R. D. Smedley	County Medical Officer of Health.
Deputy „	Dr. W. Templeton	County Tuberculosis Officer.
Medical Inspector	Dr. W. J. Butcher (Resigned 31.12.37)	M.O.H., Southern Combined Sanitary Districts.
Assistant County Medical Officer	Dr. H. M. Ayres	M.O.H., Bognor Regis U.D.
„	Dr. C. F. Brockington	M.O.H., West Sussex (North East) Combined District.
„	Dr. J. L. Newman	M.O.H., Midhurst R.D.
School Dentists	{ Mr. H. D. Hall, Senior Dentist.	
	{ Mr. E. S. Brabazon.	
	{ Miss A. M. I. Halsall.	
	{ Mr. A. Topping (Appointed 19.4.37.)	
	{ Mr. C. D. Wallis.	
Dental Attendant	Miss M. Rasell (Appointed 5.4.37)	

PART-TIME STAFF :—

*Medical
Practitioners
undertaking eye
work, etc.*

Medical Officers for Eye Work :—

Dr. P. H. Nankivell Crawley.
 Dr. J. W. Dew Horsham Clinic.
 Dr. W. B. Heywood-
 Waddington Arundel Clinic.
 Dr. J. K. Raymond Worthing Hospital.
 (Resigned 25.5.37)
 Dr. A. G. Curzon-Miller „ „
 (Appointed 26.5.37)
 Dr. H. C. L. Morris Bognor Regis.
 Dr. J. A. Valentine Chichester Clinic.

Nose and Throat Operations :—

Members of the Medical Staffs of the Local Hospitals at Arundel, Bognor Regis, Brighton (Sussex Throat and Ear), Chichester, Crawley, Easebourne, Emsworth, Haslemere, Horsham, Littlehampton, Petersfield, Petworth and Worthing.

Diseases of the Ear :—

Mr. A. M. Barford Chichester School Clinic.
 Mr. J. H. H. Gough „ „
 Mr. T. S. Allen Sussex Throat and
 (Resigned 31.10.37) Ear Hospital, B'ton.
 Mr. G. A. Fraser „ „
 (Appointed 1.11.37)

<i>Medical Practitioners undertaking eye work, etc.</i>	{	<i>Medical Inspection of Secondary Schools :—</i>	
		Dr. R. C. Hutchinson	(Resigned 31.7.37)
		(Worthing)	Worthing Boys.
		Dr. Margaret Hammond	
		(Bognor Regis)	{ Chichester Girls
			Worthing Girls.
		Dr. Alice Owen	
		(Horsham)	Horsham Girls.
		Dr. J. W. Dew	
	{	(Horsham)	Horsham Boys.
		Dr. J. H. H. Gough	
		(Chichester)	Chichester Boys.
		Dr. M. Fawkes	
		(Midhurst)	Midhurst Boys.

Orthopaedic Surgeon : Mr. H. J. Seddon, F.R.C.S. (from Royal National Orthopaedic Hospital, London).

Orthopaedic Nurse : Miss L. M. C. Maynard.

<i>School Dentists</i>	{	Mr. W. J. Scoble	Private practice.
		(Chichester)	
	{	Mr. E. N. Stevens	Private practice.
		(Midhurst)	

NURSING STAFF :—

The Staff of the West Sussex County Nursing Association, and affiliated District Nursing Associations, consisting of County Superintendent, 1st Assistant County Superintendent, 2nd Assistant County Superintendent, 3 whole-time Nurses, and 78 District Nurses.

2.—CO-ORDINATION WITH OTHER HEALTH SERVICES—

(a) As stated in my previous reports, there is close co-ordination with the Maternity and Child Welfare Committee in such matters as orthopaedic treatment, treatment of diseases of the ear, nose and throat, and examination for defective vision. In December, 1935, a scheme was approved whereby the services of the School Dental Staff could be utilised for the routine inspection and treatment of children under school age and of expectant and nursing mothers. Although it was not possible to commence the general routine inspection and treatment of maternity and child welfare cases, a few selected cases have been referred for treatment during the year. Also in three instances (Arundel, Chichester and Horsham) the same buildings are used in common. Further, home supervision is simplified by the fact that in rural areas the same Nurse acts as Health Visitor and School Nurse.

Records of abnormal children, when they reach school age, are transferred to the School Medical Department.

(b) **Nursery Schools**—Nil. Provision is made for very young children at two infants' schools : Fishersgate (Southwick) and St. James's (Chichester).

(c) **Debilitated Children** under school-age are dealt with at Centres and Nutrition Clinics or supervised by Health Visitors.

3.—SCHOOL HYGIENE.—During the year, representation was made in respect of defects relating to sanitation (3), cleanliness (1), playgrounds (1), rat infestation (1), and water supply (1).

In addition, special reports were submitted in respect of two Schools.

4.—MEDICAL INSPECTION.—The arrangements during the year were as follows :—

Medical Inspector.	No. of Depts.	No. of Children on Roll.
Dr. Ayres	47	6875
Dr. Butcher	48	5384
Dr. Brockington	49	4888
Dr. Newman	29	3414
	173	20561

Two visits per annum are paid to each School to complete routine inspections, the examination of Special cases and re-examination of children previously found to be defective.

- (a) Age groups subjected to routine inspection :—
 - (i) Entrants ; (ii) Intermediates ; (iii) Leavers.
- (b) The inspections are conducted in accordance with the Board of Education's Schedule of Medical Inspection.
- (c) No serious inconvenience to school arrangements was caused by medical inspection. Owing to over-crowding it was necessary to use premises other than the School when the children were inspected at the Selsey C. Mixed School, and Steyning C.E. School.

5.—FINDINGS OF MEDICAL INSPECTION.—In Table I., appended, the number of *routine inspections* at different age-periods is given. With slight variation the numbers of inspections and re-inspections are substantially the same as in previous years.

Section C of this Table has been revised by the Board of Education, and now shews separately the number of individual children requiring treatment for (i) defective vision, excluding squint, and (ii) all other conditions recorded in Table II.A. The percentage of children requiring treatment was 11.3, as against 12.0 in 1936.

From Table II.B it will be found that the nutrition of 30.31 per cent. of the children examined was slightly subnormal, and 2.92 per cent. bad, as against 24.73 per cent. and 0.67 per cent. in 1936.

In Table II. A., appended, will be found a list of the defects discovered at Medical Inspection.

There was an increase in the number of children observed to have enlarged tonsils (now referred to as chronic tonsillitis in the Tables) and adenoids, and also a slight increase in the number of children recommended for operative treatment compared to the previous year.

There was a slight decrease in the number of children recommended for treatment for defective vision, squint, etc., as compared with last year.

6.—INFECTIOUS DISEASE.—The Head Teachers report to the School Medical Officer and to the District Medical Officers of Health all children absent from School when an infectious disease is suspected to be the cause, as also contacts. Children are allowed to return to School after the disinfection of the home has been completed by the Local Sanitary Authorities, or at appropriate intervals after recovering from Measles, Whooping Cough, etc.

During the year, Schools were closed on 14 occasions, as compared with 10 in 1936 and 11 in 1935, on account of infectious disease, as follows :— Influenza, associated with Epidemic Colds, Chicken Pox or Whooping Cough, 9 ; Influenza, 3 ; Diphtheria, 1 ; Epidemic Colds, 1.

The average period of closure was 0.97 weeks.

After any outbreak of infectious disease, directions are given for the thorough cleansing of the School premises with soap and water, containing a little disinfectant. The fumigation of buildings as formerly practised has been discontinued for many years. After outbreaks of Scarlet Fever or Diphtheria, pens, pencils, rulers and rubbers, if not destroyed, are treated with disinfectant.

Certificates where the average attendance had fallen below 60 per cent., due to the prevalence of epidemic illness, were issued in 53 instances, under the following circumstances :—Influenza, associated with Epidemic Colds, Chicken Pox or Whooping Cough, 24 ; Influenza, 9 ; Whooping Cough, 5 ; Whooping Cough, associated with Epidemic Colds or Mumps, 4 ; Chicken Pox, 3 ; Epidemic Colds, 3 ; Chicken Pox, associated with Measles or Scarlet Fever, 2 ; Mumps, 1 ; Mumps, associated with Epidemic Colds, 1 ; Scarlet Fever, 1.

The average period in which attendance was reduced below 60 per cent. was 1.79 weeks, as compared with 2.64 weeks in 1936.

7.—DIPHTHERIA IMMUNISATION.—As mentioned in my previous report, in the latter half of 1936 a start was made with this work, organised by Dr. Templeton with the help of the Medical Officers of Health of the Sanitary Districts and of Medical Officers in attendance at the Maternity and Child Welfare Centres.

The inoculation consists of two injections of Alum Precipitated Toxoid (B. W. & Co.); a dose of 0.1 c.c. being followed at an interval of not less than three weeks by a dose of 0.5 c.c. No cases of re-action of a serious nature have been reported.

The simplicity of the procedure makes its own appeal, and the response of the parents has been excellent. Progress has been rapid. In another year it is hoped that a high proportion of the younger children will be immunised.

8.—FOLLOWING UP.—After the Inspections, the parents receive notice in writing of the conditions requiring treatment, and at the same time, lists of defects are sent to the School Correspondent, Care Correspondent (if any) and the Head Teacher.

In this way is obtained from a number of parents their consent to the treatment of their children for nose and throat conditions, defective eyesight and defective teeth. When treatment is refused the cases are referred to the Nurses, who visit the parents and advise, and in addition special letters are written by the School Medical Officer to the parents where the Nurse fails to convince them. Children suffering from minor ailments are referred at once to the Nurses for treatment at the Clinics, or otherwise, and suspected cases of Tuberculosis are referred to the Dispensaries.

9.—MEDICAL TREATMENT.—The following statement gives the arrangements for treatment in this county. The figures relating to the number of children treated cannot be compared accurately with the Findings of Medical Inspection recorded in paragraph 5, as a number of cases awaiting treatment are carried forward from one year to another :—

(a) Minor Ailments.

Name and Address of Clinic.	Day and Hour of Clinic.	No. of Children Treated.	Total No. of Atten- dances made.
Arundel—Granville House, Maltravers Street ..	Wednesday, 10 a.m.	33	158
Bognor Regis—Council School, Lyon Street ..	Tuesday, 2 p.m.	395	2395
Chichester—Chapel Street	Monday, 2 p.m. Friday, 10 a.m.	309	3189
Horsham—Health Centre, Hurst Road	Wednesday, 1.30 p.m. Friday, 10 a.m.	134	446
Littlehampton — Church Army Hall, Maltravers Road	Monday, 10.30 a.m.	598	2494
St. Catharine's R.C. School	Wed., 10.30 a.m.	241	1370
Shoreham-by-Sea— Council Infants' School	Monday, 2.15 p.m. Friday, 2.15 p.m.	222	643

Summarising this statement, records exist of 1932 children who made 10,695 attendances at the Clinics. In addition, a large number of children were supervised at home and in the Schools by the Nurses, as stated above in paragraph 8. For further information Table IV., Group I., should be consulted.

(b) **Tonsils and Adenoids.**

Hospital.		No. of Cases treated during 1937.	Terms arranged.	
			Surgeon's Fees (including Anaesthetist).	Hospital Charges for Accommodation and Maintenance.
Arundel ..	..	18	£1 11s. 6d. for the first case and £1 5s. 6d. for each subse- quent case treated at the same time.	Hospital Authorities collect a sum not ex- ceeding 3s. 6d. per day from the parents of the children.
Bognor Regis ..	..	59	Do.	Hospital Authorities collect a sum not ex- ceeding 3s. 6d. per day—a day reckoned as 24 hours—from the parents of the child- ren.
Crawley ..	..	13		
Petersfield ..	..	1		
Easebourne ..	..	18	Do.	Hospital Authorities collect a sum not ex- ceeding 5s. from the parents of the child- ren.
Emsworth ..	..	18		
Horsham ..	..	47		
Petworth ..	..	6		
Chichester Royal West Sussex ..	..	112	Do.	3s. 6d. per day or part of a day — a day reckoned as 24 hours.
Littlehampton and District ..	..	64		
Worthing ..	..	34		
Haslemere ..	..	5	£1 1s. per case, (i.e., Operator 10s. 6d., Anaes- thetist 10s. 6d.)	5s. per case.
Brighton— Sussex Throat and Ear ..	..	80	£1/11/6 per case or if taken in session of 4 patients £5/5/- (£1/6/3 per case).	Hospital charge 2s. 6d. per case. Maintenance charge 7/- per day.

Two or more cases were treated at the same time whenever this could be arranged by the Hospital Authorities.

All cases were followed up by the School Nurses and given instructions in breathing exercises, which must be continued for a long period in order to re-educate the child in breathing through the nose.

(c) **Tuberculosis.**—During the year 136 children of school age were referred to the Dispensaries. A number of these were examined as contacts to known cases of Pulmonary Tuberculosis, and others were directly referred on the advice of the School Medical Inspectors, Doctors in private practice, and School Nurses.

In addition, 136 children seen in previous years were re-examined and kept under observation.

Of the total number of children examined, or re-examined, 3 were diagnosed to be suffering from Pulmonary Tuberculosis and 21 from Tuberculous Disease of Glands, Bones or Joints, etc.

Under the Scheme of Treatment of the County Council, 31 children received treatment at Aldingbourne House Sanatorium during the year ; 11 received surgical treatment at the Royal West Sussex Hospital, Chichester ; 12 at the Lord Mayor Treloar Hospital, Alton ; and 2 at the Royal National Orthopaedic Hospital, Stanmore.

(d) **Skin Diseases and other Minor Ailments.**—The conditions which receive treatment are set out in Table IV., Group I. Forty-seven cases of scabies were detected and dealt with satisfactorily. Seven cases of ringworm of scalp were under treatment at the beginning of the year ; two new cases were treated, and five were discharged as cured, and one left the district before treatment was completed, leaving three cases under treatment at the end of the year. Children receiving regular treatment were permitted to attend School, suitable precautions being taken to prevent the spread of infection and, in consequence, there was a negligible loss of attendance due to this complaint.

X-ray Treatment of Ringworm of Scalp.—Two of the cases referred to above received X-ray treatment.

(e) **External Eye Disease.**—Cases of external eye disease are treated at the Minor Ailment Clinics, and treatment at home is supervised by the School Nurses. Intractable cases, where an error of refraction is suspected to be present, are referred to the Eye Clinics.

(f) **Vision.**—In Table IV., Group II., it will be seen that 832 cases were treated, as against 790 cases in the previous year. Refraction work is undertaken at six centres (see paragraph 1).

Ten cases were recommended for operative treatment for squint, and three of these received operative treatment, otherwise than under the Education Committee's Scheme.

(g) **Dental Treatment.**—Table V. contains a record of the work of the School Dentists. The following statement makes comparison with previous years :—

No. of Children	1931	1932	1933	1934	1935	1936	1937
Inspected ..	16560 (100)	14197 (100)	13868 (100)	12832 (100)	15244 (100)	14225 (100)	14304 (100)
Found to require Treatment ..	10741 (65)	9792 (69)	9613 (69)	8982 (70)	10974 (71)	10986 (77)	10945 (77)
Actually Treated	6660 (40)	5946 (42)	5844 (42)	5643 (44)	6821 (45)	6791 (48)	7172 (50)

The figures in brackets are reduced to facilitate comparison, and shew for every hundred children inspected :—

- (i.) The number of children requiring treatment.
- (ii.) The number of children actually treated.

It will be noted that during the year 7,172 children received treatment at the Clinics, representing 66% of the children found to require treatment. In addition, a few children received treatment from Private Dentists.

(h) **Crippling Defects and Orthopaedics.**—The following statement is a summary of the cases seen by the Orthopaedic Surgeon :—

Orthopaedic Clinic.	No. of Sessions	No. of Cases seen						Total Attend- ances
		New		Old		Total		
Arundel	5	30	(11)	64	(18)	94	(29)	150 (49)
Chichester ..	8	98	(36)	137	(45)	235	(81)	387 (147)
Horsham	5	49	(17)	94	(19)	143	(36)	232 (59)
Shoreham	4	53	(17)	66	(12)	119	(29)	179 (37)
* Worthing ..	5	47	(15)	72	(23)	119	(38)	174 (60)
	27	277	(96)	433	(117)	710	(213)	1122 (352)

*With the approval of the Worthing Education Committee, five special Clinics were held at the Worthing School Clinic for children living near Worthing.

Figures in brackets refer to children under school age

The following Table, prepared under the direction of Mr. Seddon, Orthopaedic Surgeon, shews the cases examined at the Orthopaedic Clinics during 1937 :—

Diagnosis.	Number of:—		Total.
	Boys.	Girls.	
1. Congenital Defects :—			
Club foot	19 (8)	16 (11)	35 (19)
Dislocation of the hip ..	— (—)	4 (—)	4 (—)
Spastic paralysis	6 (1)	10 (4)	16 (5)
Spina bifida	3 (2)	1 (—)	4 (2)
Other conditions	32 (15)	35 (15)	67 (30)
2. Birth Injuries :—			
Torticollis	8 (2)	3 (1)	11 (3)
Other conditions	1 (—)	1 (—)	2 (—)
3. Rickety Deformities :—			
Bow legs	37 (26)	36 (28)	73 (54)
Knock knees	8 (3)	4 (—)	12 (3)
Other conditions	3 (—)	2 (2)	5 (2)
4. Knock knees (non-rickety) ..	60 (17)	66 (13)	126 (30)
5. Postural defects of the spine	48 (1)	73 (—)	121 (1)
6. Structural curvature of the spine	10 (—)	2 (1)	12 (1)
7. Flat Feet, etc.	95 (15)	94 (17)	189 (32)
8. Infantile paralysis	10 (1)	11 (—)	21 (1)
9. Sequelae of acute fevers :			
Encephalitis lethargica ..	1 (1)	3 (1)	4 (2)
10. Fractures	1 (—)	2 (—)	3 (—)
11. Tuberculous joints	— (—)	1 (—)	1 (—)
12. Other Bone Diseases (Non-tubercular) :—			
Epiphyseitis of the spine ..	1 (—)	— (—)	1 (—)
Perthe's disease	1 (—)	2 (2)	3 (2)
Schlatter's disease	2 (—)	1 (—)	3 (—)
Apophysitis of the os calsis, etc	1 (—)	— (—)	1 (—)
13. Osteomyelitis	3 (—)	1 (—)	4 (—)
14. Pseudo-hypertrophic muscular dystrophy	1 (—)	1 (—)	2 (—)
15. Old amputation (case for artificial limb)	3 (—)	— (—)	3 (—)
16. Other conditions	24 (8)	44 (10)	68 (33)
	378 (100)	413 (105)	791 (205)

Figures in brackets refer to children under school age.

On page 9 it will have been seen that 213 children under School age attended the Clinics during the year, whilst only 205 defects are shewn in the above Table. This discrepancy is accounted for by the fact that since their first examination a number of children are now attending School, and are included in the figures for school children.

Eight cases were receiving In-patient treatment at the Royal National Orthopaedic Hospital at the commencement of the year and 22 cases were admitted, and 4 re-admitted to the Hospital during the year ; 26 of these cases were discharged, leaving 8 still under treatment at the end of the year.

The cases admitted were as follows :—Deformity of foot, 8 ; Leg Deformities and Injuries, 6 ; Old infantile Paralysis, 4 ; Wry neck, 2 ; Osteomyelitis, 1 ; Deformity of Spine, 1 ; Spastic Hemiplegia, 1 ; Spastic Paraplegia, 1 ; Hip Disease, 1 ; Deformity of Thumb, 1.

Also, one case received treatment at the Alexandra Hospital for Children with Hip Disease.

Special boots or other appliances were supplied in 26 cases.

Twenty-seven cases were X-rayed during the year.

The treatment received by tuberculous children is referred to in paragraph 9 (c).

The following statement is a summary of the cases treated by Miss Maynard, Orthopaedic Nurse :—

Total No. of Cases.	No. of New Cases.	No. of Attendances.	No. of Different Places Visited.
296 (71)	146 (35)	3583 (710)	53 (31)

Figures in brackets refer to children under school age.

(i) **Other Defects.**—Under this heading are included Anaemia 20, Bronchitis 32, Pulmonary Tuberculosis 3, Non-Pulmonary Tuberculosis 21. The Education Committee are not responsible for the treatment, but in all instances it will be understood that these cases have been supervised, and pressure brought upon the parents to secure such treatment as would seem to be helpful, though not necessarily definitely curative, as some of the conditions are not amenable to any form of treatment.

(j) **Diseases of the Ear.**—During the year 11 special clinics for Diseases of the Ear were held at Chichester and Brighton, and 100 children attended. The following table summarises the work done and treatment carried out :—

DISEASES OF THE EAR, 1937.

Clinic	No. of Clinics held	No. of Cases	No. of Attendances	Operative Treatment			Tonsils Ade-noids Remov'd	Total Dis-charged
				Mas-toid operation	Para-cen-tesis	Other Con-ditions		
Chichester..	6	57 (3)	65 (3)	— (—)	— (—)	1 (—)	18 (—)	9 (—)
Sussex T. & E. Hospital Brighton..	5	43 (2)	45 (2)	2 (—)	2 (—)	2 (—)	16 (—)	4 (—)
	11	100 (5)	110 (5)	2 (—)	2 (—)	3 (—)	34 (—)	13 (—)

Figures in brackets refer to children under school age.

Two cases of acute ear disease (included in the above Table) were referred under the Scheme to a special hospital and received operative treatment (Paracentesis).

10.—SCHOOL NURSES.—The arrangements remain the same as previously reported.

The School Nurses made 16,769 home visits in addition to making a large number of special examinations of children at Schools, in which must be included 48,186 inspections of children at the routine head examination. There were also 2,223 Clinic Sessions which they attended.

11.—UNCLEANLINESS.—Routine Head Inspections consist of three consecutive visits to Schools, paid at weekly intervals, and any cases which remain in an uncleanly condition after the third visit are kept under supervision at home and at School until such time as the condition is remedied.

At 183 inspections, as compared with 194 in the previous year, all the children were found to have clean heads. About 2.8 per cent. of the children inspected had nits or vermin in their hair.

12.—OPEN AIR EDUCATION.—No School in this Area.

13.—CO-OPERATION OF PARENTS.—All parents receive a printed letter of invitation to attend the Routine Medical Inspections for interview with the Medical Officers, and about 59 per cent of the parents attended last year.

14.—CO-OPERATION OF TEACHERS AND SCHOOL ATTENDANCE OFFICERS.—As for many years past, Head Teachers and their staffs have continued to give most invaluable assistance to the School Medical Officer and his staff, and without their co-operation many cases would remain untreated. They have also considerably facilitated arrangements at the Clinics by referring children suffering from minor ailments for treatment. The School Attendance Officers have also given every assistance by reporting absentees, making arrangements for special examinations and by warning parents when children have been excluded from School for uncleanliness.

15.—CO-OPERATION OF VOLUNTARY BODIES.—The National Society for the Prevention of Cruelty to Children, through the Inspector of the Chichester and Horsham Area and the Inspector of the Brighton Area, has again rendered valuable assistance by reporting cases and supervising same where there is neglect.

16.—BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.—Such cases are reported to the Authority by Head Teachers, School Attendance Officers and School Nurses, or found by the Medical Officers at their Inspections. All cases are registered and specially examined as opportunity occurs. 130 children were submitted to Special Examinations, viz.:—Deaf and Dumb, 2; Partially Deaf, 1; Epileptic, 3; Heart Disease, 19; Crippled, 3; Mentally Defective (re-examined), 4; alleged to be Mentally Defective, 98, of whom 20 were found to be defective.

The following table shews the number of children in Special Schools at the commencement of the year, the admissions and discharges during the year and the number still in Special Schools on 31st December, 1937.

Condition.	No. in Special Schools 1/1/37	Admitted during year.	Discharged during year.	No. in Special Schools 31/12/37
Blind	6	1	1	6
Partially Blind	1	1	—	2
Deaf	4	1	—	5
Partially Deaf	3	—	—	3
Feeble Minded	22	5*	5	22
Epileptics	5	3*	3	5
Cripples	5	—	1†	4
Heart Disease	2	12	9	5
Total	52	23*	19†	52

*Includes cases taken over from other Authorities.

† .. one case taken over by another Authority.

Cases admitted to the Royal National Orthopaedic Hospital are not included in the above Table (see 9 (h), Crippling Defects and Orthopaedics).

Nine of the nineteen children discharged from Special Schools had attained the age of 16 years, viz.:—Feeble-minded, 5; Blind, 1; Epileptic, 3. The five feeble-minded children were referred to the Committee for the care of the Mentally Defective. Of the fourteen remaining cases, the responsibility for one crippled girl has been transferred to another Authority on removal of parents, and seven of the heart cases were discharged from the Lancing Heart Home, having made satisfactory progress.

17.—PROVISION OF MILK FOR SCHOOL CHILDREN.—The “Milk in Schools” Scheme, which came into operation in October, 1934, and was explained in detail in my Annual Report for that year, has been adopted in practically all Schools, but it is to be regretted that there are still so many districts where it is not possible to obtain supplies of pasteurised milk.

The Education Committee provide one-third of a pint of milk or more, free of charge, to every necessitous child of subnormal nutrition recommended by the School Medical Officer. Also, at six Schools where a supply of milk is not available, grants at the rate of $\frac{1}{2}$ d. per child per day have been made in respect of necessitous children of subnormal nutrition for the supply of a milk preparation instead of milk.

The following summary shews the position at the end of the year :—

Number on Roll.	Number of Subnormal Children.	Number of Necessitous Sub- normal Children.
20922	5778	3328

Nutrition was reported as subnormal in 27.6 per cent. of the children on the roll, as compared with 26.7 in the previous year, and 15.9 per cent. were regarded as necessitous, as compared with 14.4 in the previous year.

18.—NUTRITION CLINICS.—Since April, Nutrition Clinics have been held at Arundel, Bognor Regis, Chichester, Horsham, Littlehampton and Shoreham. 212 children attended for periodical examination and made 843 attendances. Where necessary, Cod Liver Oil and Malt, etc., was supplied, free of charge in necessitous cases or at cost price where parents could pay for same. Also, in certain cases children were recommended for additional milk in School.

It is scarcely necessary to stress the value of milk as a food, but a small ration of milk is little compensation to the growing child lacking, for economic reasons, a balanced mixed diet in which milk, meat, fish, cheese, eggs and vegetables of all kinds play their traditional part. In a special report, attached, Dr. Brockington, stressing the needs of growth of the child, demonstrates the conflict that arises when the low-wage earner's family expands, and probably few will disagree with his suggestion that the provision of a mid-day meal in School would be the most efficient means of securing adequate nourishment for the growing school-child.

19.—SECONDARY SCHOOLS. — Medical Inspection.—The scope of the Medical Inspection has been extended by the inclusion of an additional age-group, and every pupil is now medically examined at least once in every two years.

Medical Treatment.—There is no scheme for the treatment of pupils, but free-place pupils are examined on admission to the Secondary Schools and, if found to require treatment, this treatment is provided under the scheme for treatment of elementary school-children.

Tables I. and II. on pages 26, 27 and 28 give the number of pupils inspected and the results of inspection in the eight Secondary Schools. It will be seen from Table II. that defective eyesight and chronic tonsillitis were the conditions chiefly requiring attention.

Dental Inspection and Treatment.—As stated in my last Report, the Committee approved a Scheme for the inspection and treatment of pupils at the Secondary Schools.

A start was made with the Worthing High School for Boys and Chichester High School for Boys, and it is hoped that in future all Schools will be dealt with annually.

Table III., on page 29, gives the number of pupils inspected and treatment carried out, and this matter is also referred to in the report of the Senior School Dentist, appended.

20.—CHILDREN AND YOUNG PERSONS ACT, 1933.—This Act came into operation on the 1st November, 1933, and the local authority has certain duties to perform.

Under Section 22 the local authority may grant a licence for a child, who has attained the age of twelve years, to take part in any entertainment in connection with which any charge, whether for admission or not, is made to any of the audience, provided the authority are satisfied that the child is fit to take part in the entertainment, and that proper provision has been made to secure his health and kind treatment.

Two children were medically examined and granted licences under this Section during the year.

Section 35 deals with a child or young person who is brought before a Court of Summary Jurisdiction, in respect of an offence alleged to have been committed by him, or is to be brought before a juvenile court as being in need of care or protection. During the year 126 cases were referred to the local authority, of whom 105 received special examination for detection of physical or mental defect.

Of this number, on examination, six cases were classified as feeble-minded.

Under Section 62 it is the duty of a local authority to bring before a Juvenile Court any child or young person residing or found in their district who appears to them to be in need of care or protection, unless they are satisfied that the taking of proceedings is undesirable in his interests, or that proceedings are about to be taken by some other person. The Juvenile Court may :—

- (a) Order him to be sent to an Approved School ; or
- (b) Commit him to the care of any fit person, whether a relative or not, who is willing to undertake the care of him ; or
- (c) Order his parent or guardian to enter into a recognisance to exercise proper care and guardianship ; or
- (d) Without making any other order, or in addition to making an order under either of the last two foregoing paragraphs, make an order placing him for a specified period, not exceeding three years, under the supervision of a probation officer, or of some other person appointed for the purpose by the court.

Four cases were dealt with under this Section, one being classified as feeble-minded.

Under Section 76 (1) the local authority shall for the purposes of the provisions of this Act relating to the making of orders committing children and young persons to the care of fit persons be deemed to be a fit person and accordingly orders may be made committing children and young persons to their care and they may undertake the care of children and young persons so committed.

During the year, three children were committed to the care of the Education Committee, and are periodically supervised by the Health Visitors.

21.—ROYAL AIR FORCE.—Entry of Aircraft Apprentices and Boy Entrants.—In July, 1937, a letter was received from the Air Ministry stating that it had been found that considerable disappointment had often been experienced by candidates for entry as Aircraft Apprentices and Boy Entrants who are rejected on medical grounds when called up to commence training. The Air Ministry suggest in their pamphlets dealing with the entry into the Royal Air Force that candidates should undergo a preliminary examination by a Doctor to ascertain whether they are suffering from any physical disability which might prevent their acceptance on medical grounds. The Authority were asked if they would co-operate with the Air Ministry by arranging for preliminary examinations.

During the year, 17 boys were examined for this purpose and in only one case was it thought that the candidate would not be accepted on medical grounds.

22.—RARE CONGENITAL DEFECTS.—The Authority have been co-operating with the Human Genetics Committee of the Medical Research Council in an investigation into inheritance in relationship to disease. The scheme consists of an inquiry into the incidence of certain defects, and the value of the inquiry lies not so much in the importance of the special defects but rather in their suitability as material for the study of the laws of inheritance in man.

Our co-operation was confined to the noting by the School Medical Officers at their routine inspections of all children in the "Leaver" age-group who came within the categories mentioned by the Human Genetics Committee, and of the 2000 odd children examined in this age-group only one, a girl, was classified as coming within the scope of the inquiry.

The inquiry is being continued in 1938.

23.—EMPLOYMENT OF CHILDREN.—There is no Juvenile Employment Officer in the area. During the year a number of children were examined as to their fitness for employment in the City of Chichester, under the Education Committee Bye-Laws, and in the majority of cases certificates were issued. In a few instances however, the certificates were refused pending the children receiving certain medical treatment.

Five children, at their last routine examination, were noted to be unsuitable for certain types of work and the parents were advised accordingly.

24.—In conclusion, I desire on behalf of myself and staff once more to thank your Committee, the Teaching Staff, and Aid Committees, for valuable support and co-operation.

RALPH D. SMEDLEY,
School Medical Officer.

COUNTY HEALTH OFFICE,
COUNTY HALL,
CHICHESTER.

April, 1938.

TABLE I.

**MEDICAL INSPECTIONS OF CHILDREN ATTENDING
PUBLIC ELEMENTARY SCHOOLS.**

1st January, 1937, to 31st December, 1937.

A.—ROUTINE MEDICAL INSPECTIONS.

Number of Inspections in the prescribed Groups :—

Entrants	2824
Second Age Group	2398
Third Age Group	2209
Total	<u>7431</u>

B.—OTHER INSPECTIONS.

Number of Special Inspections	†2482
Number of Re-Inspections	*6167
Total	<u>8649</u>

C.—CHILDREN FOUND TO REQUIRE TREATMENT.

Number of Individual Children found at Routine Medical Inspection to require treatment (excluding Defects of Nutrition, Uncleanliness and Dental Diseases).

Group	For Defective Vision (excluding Squint)	For all other Conditions recorded in Table II.A	Total
Entrants	25	248	273
Second Age Group ..	146	170	312
Third Age Group ..	141	119	256
Total ..	312	537	841

†Does not include “Special” examinations in connection with the “Provision of Milk for School Children” (Circular 1437).

*Does not include re-inspections made by the Tuberculosis Officers at the Dispensaries.

TABLE II.

**A.—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION
IN THE YEAR ENDED 31st DECEMBER, 1937.**

Defect or Disease.	Routine Inspections.		Special Inspections.	
	No. of Defects.		No. of Defects.	
	Requiring treatment	Requiring to be kept under observation, but <i>not</i> requiring treatment.	Requiring treatment	Requiring to be kept under observation, but <i>not</i> requiring treatment
(1)	(2)	(3)	(4)	(5)
Skin—				
Ringworm—				
Scalp	—	—	2	—
Body	—	—	13	—
Scabies	5	—	20	—
Impetigo	20	—	23	—
Other Diseases (non-Tuberculous)	48	—	90	—
Total ..	73	—	148	—
Eye—				
Blepharitis	37	—	36	—
Conjunctivitis	9	—	25	—
Keratitis	—	—	—	—
Corneal Opacities	1	—	4	1
Other Conditions (excluding Defective Vision and Squint)	8	9	23	14
Total ..	55	9	88	15
Defective Vision (excluding Squint)	312	395	226	53
Squint	26	26	10	9
Ear—				
Defective Hearing	18	19	47	20
Otitis Media	30	—	63	—
Other Ear Diseases	14	35	44	7
Nose and Throat—				
Chronic Tonsillitis only	72	256	155	19
Adenoids only	12	36	26	11
Chronic Tonsillitis and Adenoids	119	279	208	57
Other Conditions	9	124	37	18

Table II.—(continued).

(1)	(2)	(3)	(4)	(5)
Enlarged Cervical Glands (non-Tuberculous) ..	16	250	43	29
Defective Speech ..	—	14	3	1
Heart and Circulation—				
Heart Disease—				
Organic	5	38	8	25
Functional	1	50	6	26
Anaemia	7	9	13	11
Lungs—				
Bronchitis	15	94	17	33
Other Non-Tuberculous Diseases	4	31	10	20
Tuberculosis—				
Pulmonary—				
Definite	—	—	3	—
Suspected	—	—	—	—
Non-Pulmonary—				
Glands.. ..	—	—	16	—
Bones and Joints	—	—	3	—
Skin	—	—	—	—
Other Forms	—	—	2	—
Total ..	—	—	21	—
Nervous System—				
Epilepsy	4	7	7	12
Chorea	1	5	11	6
Other Conditions	1	8	11	5
Deformities—				
Rickets	—	5	—	1
Spinal Curvature	23	45	6	5
Other Forms	68	44	40	4
Other Defects and Diseases (excluding Defects of Nutrition, Uncleanliness and Dental Diseases). ..	74	134	295	59
Grand Total ..	959	1913	1546	4 46

B.—CLASSIFICATION OF THE NUTRITION OF CHILDREN INSPECTED DURING THE YEAR IN THE ROUTINE AGE GROUPS.

Age-Groups	Number of Children Inspected	A (Excellent)		B (Normal)		C (Slightly Subnormal)		D (Bad)	
		No.	%	No.	%	No.	%	No.	%
Entrants	2824	150	5.31	1726	61.11	855	30.27	93	3.29
Second Age Group	2398	137	5.71	1378	57.44	800	33.35	83	3.46
Third Age-Group	2209	239	10.81	1331	60.22	598	27.14	41	1.86
TOTAL ..	7431	526	7.08	4435	59.68	2253	30.31	217	2.92

TABLE III.

RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA ON 31st DECEMBER, 1937.

21

	At Certified Schools for						At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Totals
	Blind	Partially Blind	Deaf	Partially Deaf	Mentally Defective	Epileptic					
Blind	6	—	—	—	—	—	—	—	—	—	6
Partially Blind	2	—	—	—	—	—	—	—	—	—	2
Deaf	—	—	5	—	—	—	—	1	—	—	6
Partially Deaf	—	—	3	—	—	—	—	—	—	—	3
Feeble Minded	—	—	—	—	22	—	—	39	—	28	89
Epileptic (Severe)	—	—	—	—	—	5	—	3	—	—	8
Tuberculosis (Pulmonary)	—	—	—	—	—	—	—	14	3	—	17
Tuberculosis (Non-Pulmonary)	—	—	—	—	—	—	9	48	1	1	59
Delicate	—	—	—	—	—	—	—	47	7	3	57
Crippled	—	—	—	—	—	—	12	20	6	6	38
With Heart Disease	—	—	—	—	—	—	5	9	2	2	16
Totals	8	—	8	—	22	5	26	181	11	40	301
Children suffering from Multiple Defects											
											2
Total											303
Children notified to the Mental Deficiency Authority during the year											
											16

TABLE IV.

**RETURN OF DEFECTS TREATED DURING THE YEAR
ENDED 31st DECEMBER, 1937.**

TREATMENT TABLE.

Group I.—Minor Ailments (excluding Uncleanliness, for which see Table VI.)

Disease or Defect (1)	Number of Defects treated, or under treatment, during the year.		
	Under the Authority's Scheme. (2)	Otherwise. (3)	Total. (4)
Skin—			
Ringworm—Scalp			
(i.) X-ray Treatment ..	1	1	2
(ii.) Other Treatment ..	2	5	7
Ringworm—Body	39	—	39
Scabies	39	8	47
Impetigo	269	—	269
Other skin diseases	161	6	167
Minor Eye Defects—	197	4	201
(External and other, but ex- cluding cases falling in Group II.)			
Minor Ear Defects	281	5	286
Miscellaneous	2427	9	2436
(<i>e.g.</i> , minor injuries, bruises, sores, chilblains, etc.)			
Total	3416	38	3454

Table IV.—(continued).

Group II.—Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I.)

	Number of defects dealt with.		
	Under the Authority's Scheme.	Otherwise.	Total.
Errors of Refraction (including Squint)	810	22	832
Other Defect or Disease of the Eyes (excluding those recorded in Group I.)	—	—	—
Total	810	22	832
No. of Children for whom Spectacles were			
(a) Prescribed	656	20	676
(b) Obtained	656	20	676

Group III.—Treatment of Defects of Nose and Throat.

Number of Defects.													
Received Operative Treatment.												Received other forms of Treatment.	Total number treated.
Under the Authority's Scheme in Clinic or Hospital. (1)				By Private Practitioner or Hospital apart from the Authority's Scheme. (2)				Total. (3)					
(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)	(iv)		
13	7	455	—	7	1	3	—	20	8	458	—	—	486

(i) Tonsils only. (ii) Adenoids only. (iii) Tonsils and Adenoids.
(iv) Other defects of the Nose and Throat.

TABLE VI.
UNCLEANLINESS AND VERMINOUS CONDITIONS.

(i). Average number of visits per School made during the year by the School Nurses	6
(ii). Total number of examinations of children in the Schools by School Nurses	48186
(iii). Number of individual children found unclean ..	1049
(iv). Number of children cleansed under arrangements made by the Local Education Authority ..	3
(v). Number of cases in which legal proceedings were taken—	
(a) Under the Education Act, 1921 ..	—
(b) Under School Attendance Bye-Laws	—

SECONDARY SCHOOLS.

TABLE I.

MEDICAL INSPECTIONS OF CHILDREN ATTENDING SECONDARY SCHOOLS.

1st January, 1937, to 31st December, 1937.

A.—ROUTINE MEDICAL INSPECTIONS.

Ages	7	8	9	10	11	12	13	14	15	16	17	Totals
Boys	1	1	17	56	154	68	181	78	188	2	—	746
Girls	—	—	8	62	129	63	144	33	140	3	5	587
Totals	1	1	25	118	283	131	325	111	328	5	5	1333

B.—OTHER INSPECTIONS.

Number of Special Inspections	..	..	..	..	..	..	23
Number of Re-Inspections	..	..	..	..	..	..	121
							<u>144</u>

C.—CHILDREN FOUND TO REQUIRE TREATMENT.

Number of Individual Children found at Routine Medical Inspection to Require Treatment. (Excluding Uncleanliness and Dental Diseases).

Number of Children.		Percentage of Children found to require treatment.
Inspected.	Found to require treatment.	
1333	230	17

SECONDARY SCHOOLS—(continued).

TABLE II.

A.—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION
IN THE YEAR ENDED 31st DECEMBER, 1937.

Defect or Disease.	Routine Inspections.		Special Inspections.	
	No. of Defects.		No. of Defects.	
	Requiring treatment	Requiring to be kept under observation, but <i>not</i> requiring treatment	Requiring treatment	Requiring to be kept under observation, but <i>not</i> requiring treatment
(1)	(2)	(3)	(4)	(5)
Skin—				
Ringworm—				
Scalp	—	—	—	—
Body	—	—	—	—
Scabies	—	—	—	—
Impetigo	1	—	—	—
Other Diseases (non-Tuberculous)	10	—	1	—
Total	11	—	1	—
Eye—				
Blepharitis	1	—	—	—
Conjunctivitis	—	—	—	—
Keratitis	—	—	—	—
Corneal Opacities	—	—	—	—
Other Conditions (excluding Defective Vision & Squint)	—	—	—	—
Total	1	—	—	—
Defective Vision (excluding Squint)	122	73	11	2
Squint	1	1	—	—
Ear—				
Defective Hearing	1	2	—	—
Otitis Media	—	—	—	—
Other Ear Diseases	3	3	—	—
Nose and Throat—				
Chronic Tonsillitis only	37	15	—	1
Adenoids only	—	—	—	—
Chronic Tonsillitis and Adenoids	2	—	—	—
Other Conditions	4	6	—	—
Enlarged Cervical Glands— (non-Tuberculous)	3	5	—	—
Defective Speech	1	1	—	—

Table II.—(continued).

(1)	(2)	(3)	(4)	(5)
Heart and Circulation—				
Heart Disease—				
Organic	—	—	—	—
Functional	—	17	—	1
Anaemia	7	—	1	1
Lungs—				
Bronchitis	2	—	—	—
Other non-Tuberculous Diseases	3	3	1	1
Tuberculosis—				
Pulmonary—				
Definite	—	—	—	—
Suspected	—	—	—	—
Non-Pulmonary—				
Glands	—	—	—	—
Other Bones & Joints ..	—	—	—	—
Skin	—	—	—	—
Other Forms	—	—	—	—
Total ..	—	—	—	—
Nervous System—				
Epilepsy	—	—	—	—
Chorea	—	—	—	—
Other Conditions	2	—	—	—
Deformities—				
Rickets	—	—	—	—
Spinal Curvature	9	19	—	—
Other Forms	18	12	1	—
Other Defects and Diseases ..	22	14	2	1
Grand Total ..	249	171	17	6

REPORT ON AN INVESTIGATION INTO THE DIET OF FAMILIES WITH CHILDREN OF SCHOOL-AGE AND UNDER IN AN URBAN AREA AND A RURAL AREA.

By DR. FRASER BROCKINGTON.

*Medical Officer of Health of the North-Eastern Combined District
of West Sussex, and Assistant County Medical Officer for the
County of West Sussex.*

An investigation in West Sussex has recently been carried through into the budgets of families with children attending elementary Schools. The object of this investigation has been to determine to what extent the diets of such families conform to the standards laid down by nutrition experts, with, in addition, the effect on the diet caused by the growth of the family where the income remains stationary. Ninety-seven families out of two hundred in an urban school and eighty out of ninety-eight in four rural schools were analysed for this purpose. The size of family has been calculated according to a scale of cost co-efficients in the B.M.A. (1933) Nutrition Report :—

	Mean Cost Co-efficients.
Adult Male	1.00
Boy over 14 years ..	1.00
Adult Female	0.83
Girl over 14 years ..	0.83
Child 12 and under 14 ..	0.90
Child 10 and under 12 ..	0.80
Child 8 and under 10 ..	0.71
Child 6 and under 8 ..	0.60
Child 3 and under 6 ..	0.59
Child 2 and under 3 ..	0.54
Child 1 and under 2 ..	0.47

The diet recommended (also by the above report) against which the families have been gauged cost 7s. 2 $\frac{3}{4}$ d. in West Sussex in the winter of 1936/37. The prices of foods in this diet may be regarded as very low ; less economical buying by the average housewife adds a further 6d. to the cost and, therefore, 7s. 8 $\frac{3}{4}$ d. is the cost of maintaining one *man* doing normal work for one week. On the same basis a *child* aged one or two would cost 3s. 7 $\frac{1}{2}$ d. In this diet, which has been termed standard A, 4s. 2 $\frac{3}{4}$ d. represents the cost of energy foods (3,400 calories) and 3s. 6d. that of animal foods (50 grams of first-class protein). A second diet, termed standard B, which is probably the lowest recommended by any authority, has been used for the purpose of comparison. Standard B contains one shilling's worth less energy foods (2,400 calories instead of 3,400) and 10d. less first-class protein (37 grams in place of 50 grams); the cost is 5s. 10 $\frac{3}{4}$ d.

The school situated in the *urban* district was composed of families with incomes ranging from 200s. to 30s. a week, the district being prosperous with little unemployment. The 97 families contained 183 school children. Of these 51.4 per cent. were in families in which the diet fell below standard A and 20.2 per cent. below standard B.

In the *rural* schools, containing 165 children, a little over a half were in families with an income below 45s., consisting mainly of farm labourers with a simple wage (in some cases increased by 3s. added in lieu of rent of a farm cottage); 107 were in families with an income of less than 55s. Above this level there were 57 children in 25 families ranging up to an income of 200s.; these included a few farm workers (13) whose children had begun to earn substantially. Taking all the rural children irrespective of income, 72.2 per cent. were in families in which the diet fell below standard A; in those families where the income was below 55s., 78 per cent. lay below standard A, 40.6 per cent. below standard B; below 40s. 85 per cent. and 52.4 per cent.; below 35s. 91.7 per cent. and 75 per cent. In all budgets all food obtained free or at prices below those of the market had been allowed for, and these figures should represent the actual food consumed, assuming that each member of the family has his share.

Declining food provision with increasing family.

The further analysis of these families, both rural and urban, in relation to their increasing size showed clearly that food provision declined per unit in all families with growth. The following table shows this for the *urban families* :—

Table 1.
Shillings Spent on Food per Man per Week in Groups of Families arranged according to Gross Income.

Family Size in Cost Co-efficients (see scale).	40s.	50s.	60s.	80s.	100s.	150s.	200s.
2.0—2.5	—	7.4	10.4	11.1	—	—	—
2.5—3.0	4.9	8.33	8.9	11.05	—	—	—
3.0—3.5	4.0	6.05	8.3	7.65	12.0	—	—
3.5—4.0	—	5.05	6.8	8.3	—	8.3	—
4.0—4.5	3.2	4.9	6.3	7.0	8.4	9.5	10.5
4.5—5.0	3.0	4.4	6.8	9.9	8.9	8.95	—
5.0—5.5	—	—	4.7	6.1	7.8	8.4	—
5.5—6.0	—	—	4.4	7.0	—	11.0	—
6.0—6.5	—	—	—	—	7.0	6.9	7.6
6.5—7.0	—	—	—	5.55	7.5	7.2	—

It will be seen, as, for example, in the family group 4-4.5 cost co-efficients (i.e. where there were three children or occasionally four, the basis being :—Father (1.0), mother (0.83), child aged 12 years (0.9), 8 years (0.71), and 6 years (0.60), =4.04 cost co-efficients) that the amount spent at a level of 200s. of income is 10.5s. per man per week, and that this declined uniformly until in the families with a weekly wage of 40s. the amount spent was 3.2s.

In the *rural* families the same decline was found to occur, as the following table shows for families under 55s.

Table 2.

Shillings spent on Food per Man per Week in Groups of Families arranged according to Gross Income.

Family Size in Cost Co-efficients.	32s.—35s.	35s.—45s.	45s.—55s.
2.0—2.5	7.1	8.15	9.4
2.5—3.0	—	7.7	10.4
3.0—3.5	6.15	7.25	9.9
3.5—4.0	5.7	6.04	7.8
4.0—4.5	—	5.66	6.8
4.5—5.0	4.35	4.74	—
5.0—5.5	—	4.8	6.3
5.5—6.0	—	3.88	5.1
6.0—6.5	—	3.3	—

Here it is seen that where, for example, the income was 35s. to 45s. the expenditure in families with one child was 8.15s. per unit, and this declined to 3.3s. per unit when the family had grown to seven children. Furthermore, by arranging these families into entrant, middle and leaver groups, according to the age of the children, it was observed that those families which were fully embarked on the school period (i.e., after the first child had reached the age of seven year, but before any child was earning 10s. or more) fell to a greater extent and degree below “sufficiency”; in these middle-type families in the urban school 51 per cent. showed deficiency upon standard A and 26.5 per cent. on standard B, whereas no entrant families fell below standard B and only 5 per cent. below standard A, and of leaving families 45 per cent. fell below standard A, and 6.9 per cent. below standard B. When these middle-type families were analysed according to the number of children in each family, it was further seen that the degree of insufficiency increased steadily as the family grew. It is therefore clear that families provide a sufficiency of food in the early years and again when the eldest children add to the income after leaving school, but that during the intermediate period, when fully embarked upon school life, there is a deficiency (excepting where the income is adequate) increasing as the family becomes larger.

Further Study of Rural Budgets.

The problem has been further studied in rural families by itemising expenditure upon all essential food articles in income groups with families grouped according to the number of children. The standard used for comparison has been the B.M.A. (1933) diet for a child aged nine years. This further analysis has been made in respect of both quantity and balance of the diet. The findings are as follows :—

(i) Increasing family size in all groups of income reduces the quantity consumed of all constituents of the diet with the main exceptions of bread and butter; these remain, even in the lowest groups, up to 100 per cent. of the standard. (See Tables 3 and 4).

Table 3.
Adequacy of the Diet.

Expenditure upon Bread shown as a Percentage of the Standard.

	NUMBER OF CHILDREN.						
	1 c.	2 c.	3 c.	4 c.	5 c.	6 c.	7 c.
Under 35s.	156.0	79.4	146.1	131.4	86.3	—	—
35s.—45s.	139.2	85.3	115.7	121.6	123.5	123.4	107.8
45s.—55s.	130.4	129.4	97.1	130.4	—	211.8	—
55s.—100s.	117.7	134.3	111.8	109.8	127.5	164.7	—
100s.—200s.	134.3	—	84.3	—	192.2	—	179.4*

*Footnote—10 children.

Table 4.
Adequacy of the Diet.

Expenditure upon Butter and Margarine shown as a Percentage of the Standard.

	NUMBER OF CHILDREN.						
	1 c.	2 c.	3 c.	4c.	5 c.	6 c.	7 c.
Under 35s.	155.6	172.2	238.9	69.4	133.3	—	—
35s.—45s.	183.3	166.7	166.7	144.4	175.0	91.7	52.8
45s.—55s.	269.4	219.4	213.9	186.1	—	116.7	—
55s.—100s.	255.6	208.3	152.8	180.6	144.4	166.7	—
100s.—200s.	94.4	—	202.8	—	213.9	—	152.8*

*Footnote—10 children.

Sugar and Jam together show a small decline as compared with the standard but all other items decline markedly, and in families with six children, in the lower groups, fall to between 27 and 70 per cent. of the standard amount. (See Table 5).

Table 5.
Adequacy of the Diet.

Expenditure in Families with 5 and 6 Children given as a Percentage of the Standard.

Constituents of the Diet.	INCOME GROUPS.				
	Under 35s.	35s.-45s.	45s.-55s.	55s.-100s.	100s.-200s.
Meat, Fish, Eggs ..	48.9	68.9	69.6	98.56	95.6
Milk	25.2	42.9	27.9	27.9	80.3
Cheese	61.1	57.4	20.4	33.9	53.7
Tea, Coffee, Cocoa	30.6	61.1	69.4	86.1	194.4
Bread	86.3	128.4	211.8	164.7	192.2
(Including Flour and Cake)					
Butter & Margarine	133.3	91.7	116.7	166.7	213.9
Sugar and Jam ..	88.9	84.4	128.9	155.6	131.1
Vegetables & Fruit	28.3	27.3	41.4	68.7	84.6
Animal Protein ..	40.5	40.5	—	82.4	122.3
Total ..	49.9	64.5	75.1	85.1	136.0

The first class protein foods, Meat, Milk, Fish, Cheese and Eggs, fall collectively to 40 per cent. where the income is less than 55 shillings (see Table 6).

Table 6.
Adequacy of the Diet.
Expenditure upon Animal Protein shown as a Percentage of the Standard.

	1 c.	2 c.	3 c.	4 c.	5 c.	6 c.	7 c.
Under 35s.	71.1	64.0	54.2	57.1	40.5	—	—
35s.—45s.	93.5	93.2	75.0	75.0	40.5	56.3	36.3
45s.—55s.	122.6	108.9	93.2	75.3	—	43.5	—
55s.—100s.	134.8	112.2	97.9	67.3	82.4	58.0	—
100s.—200s.	142.0	—	179.2	—	122.3	—	70.2*

*Footnote—10 children.

(ii) The above changes in expenditure produce, in addition to insufficiency, profound changes in the balance of the diet. The proportion of bread to total expenditure upon food rises steeply in all income groups below 55 shillings, (containing 65 per cent. of the children), from the normal of 14 per cent. with one child, to 27-39 with six. (See Table 7).

Table 7.
Balance of the Diet.
Proportion of Bread shown as a Percentage of Total Expenditure upon Food. (Normal=14.05).

Income Group	NUMBER OF CHILDREN.						
	1 c.	2 c.	3 c.	4 c.	5 c.	6 c.	7 c.
Under 35s.	22.4	15.4	24.9	26.0	24.3	—	—
35s.—45s.	17.6	13.2	19.1	27.3	27.5	27.8	33.4
45s.—55s.	13.6	15.8	13.5	19.7	—	39.6	—
55s.—100s.	12.7	17.1	16.2	17.7	19.1	27.2	—
100s.—200s.	13.5	—	8.8	—	19.9	—	28.4*

*Footnote—10 children.

Thus in families with six children Bread is seen to constitute one third of the expenditure upon food. In contrast, the proportion of expenditure upon first-class protein foods is seen to decline. (See Table 8).

Table 8.
Balance of the Diet.
Proportion of First Class Protein shown as a Percentage of Total Expenditure upon Food. (Normal=46.28).

Income Group	NUMBER OF CHILDREN.						
	1 c.	2 c.	3 c.	4 c.	5 c.	6 c.	7 c.
Under 35s.	45.6	39.1	30.7	37.3	37.6	—	—
35s.—45s.	39.0	47.1	40.3	45.3	29.5	39.9	37.1
45s.—55s.	42.0	43.7	43.1	37.4	—	28.8	—
55s.—100s.	48.1	47.0	47.4	35.4	40.0	31.5	—
100s.—200s.	46.9	—	60.3	—	42.1	—	36.6*

*Footnote—10 children.

The increasing proportion of bread and declining proportion of first-class protein produces a profound change in the balance between essential growing foods and the energy constituents of the diet. The ratio of these, which in the B.M.A. (1933) diet for a child of 8-10 years is 0.833, is reduced to the neighbourhood of 0.400. (See Table 9).

Table 9.
Balance of the Diet.
Ratio of Expenditure upon First Class Protein Foods to that on the Energy Constituents (normal 0.833) in Families with Five Children.

	Under 35s.	35s.-45s.	45s.-55s.*	55s.-100s.	100s.-200s.
Ratio	0.602	0.423	0.366	0.461	0.714
*Footnote—Six children.					

So far as is possible, the housewife plainly strives to prevent this upset by maintaining her purchases of cheese, the more economical protein. In all income groups, cheese forms an increasing proportion of the diet as the family grows ; as, for example, in the 35s.-45s. group (containing 45 per cent. of the children), where the proportion of expenditure upon food represented by this item rises from 2.6 per cent. with one child to 7.3 with six. (See Table 10).

Table 10.
Balance of the Diet.
Proportion of Cheese shown as a Percentage of Total Expenditure upon Food. (Normal=7.44).

Income Groups	NUMBER OF CHILDREN.						
	1 c.	2 c.	3 c.	4 c.	5 c.	6 c.	7 c.
Under 35s.	3.38	4.93	2.50	3.11	9.12	—	—
35s.—45s.	2.60	5.00	5.50	7.55	5.02	6.62	7.29
45s.—55s.	3.79	3.95	3.95	5.17	—	—	—
55s.—100s.	3.92	3.62	4.64	4.42	4.84	3.40	8.05
100s.—200s.	2.85	—	1.83	—	2.94	—	5.43*
*Footnote—10 children.							

In short, in the class of agriculture workers with a simple unaugmented wage, the difference between the diet provided by families with one child and those with six is as follows :—Expenditure upon food has been reduced to half. Expenditure upon first-class protein foods has fallen to little over one-third the standard (despite a slight improvement in purchase of cheese) and these animal foods now represent 35 per cent. of the reduced expenditure as compared with 46.28 per cent. of the standard. Expenditure upon bread and butter have remained up to standard and in consequence represent a high proportion of the reduced diet. (Expenditure upon bread is a third of the cost of the diet or three times the standard). Despite, therefore, an instinctive compensation by the housewife in purchasing proportionately more cheese, the ratio of animal protein to the energy constituents

of the diet is considerably reduced (in the 45s.-55s. group, for example, from 0.731 with one child to 0.366 with six; cf. 0.833 of the standard). Growth of the family has in fact, produced a profound alteration in adequacy of the diet. As a result, a young child in such a large family receives a markedly anomalous diet with a high proportion of bread and a minimum of animal growing foods.

The Needs of Growth.

In assessing the importance of the above alterations in diet which the growth of a family produces, it is necessary to form some estimate of the needs of growth in childhood. It is accepted that the animal (or first-class) protein required for growth in childhood greatly exceeds the needs of an adult; that recommended in the League of Nations (1936) for a child of three years is 38 grams, and by the B.M.A. (1933) 28.2, (compared with the requirements of the adult, computed by most authorities at 50). It is, in fact, the higher requirements of youth which largely account, owing to the high cost of animal proteins, for the high proportionate cost of the child's diet. (Upon the scale it will be seen that a child aged 1-2 costs nearly half as much as one man to feed). It is, therefore, of the greatest significance that the decline in the provision of the amount of food per head, which is seen to accompany the growth of the family in size, causes a corresponding decline in animal proteins, with the result that in nearly all families where there is insufficiency of food there is also insufficiency of those vital substances upon which the growth impulse in childhood so largely depends. It is also significant that, in large families where food provision falls low, great insufficiency would appear inevitably to demand that preference be given to the purchase of energy constituents for the satisfaction of hunger, since this results in an enhancement of the deficiency of animal proteins by increasing inability to maintain normal balance in the diet. In consequence, at low levels of income in large families, such marked insufficiency of animal protein foods occurs as may fairly be termed "protein starvation." In the B.M.A. balanced diet costing 7s. 10 $\frac{3}{4}$ d., the allowance for protein foods (i.e. milk, eggs, fish, meat and cheese) for a child of nine is nearly 4s. per unit, and this proportion increases as the children are younger. It is suggested that protein starvation must occur (in the sense that the needs of growth are then largely unsatisfied) where expenditure upon these proteins has fallen below 2s. per unit. Upon this basis, in the above families 13.2 per cent. of the school children in the urban school and 32.7 per cent. in the rural schools were subsisting on amounts falling below this level. The higher proportion of children in country districts living on this inadequate diet (composed mainly of bread and sugar) is due apparently in the main to the somewhat larger families and the lower wages.

Conclusion.

From the above evidence there can be little doubt that the family period after the first child has entered school until he leaves and begins to earn (a period of some nine years), which should be one abundantly provided with the first-class protein foods of growth, is, in fact, the period in every family when these foods are least in evidence. In addition, among low-wage earners, particularly in country districts, a large family of school children produces a considerable degree of insufficiency which is accompanied by an upset of balance and a profound reduction in the proportion of animal foods. It is admittedly difficult to assess the importance of changes in the diet, but it is submitted that such widespread departure from recognised standards must be supposed, *prima facie*, to react adversely upon the nutrition of the child population and to call for remedy. What this may be and the relative value of the alternative suggestions which have been put forward cannot be discussed here. It should, however, be emphasised that where (as is shown in this analysis) not only "sufficiency" of diet but also the balance of its various constituents is in question, the actual provision of food (upon lines laid down by experts) must have many advantages over any other remedy. In view of this it would appear that there is much to commend the provision of mid-day meals in school.

REPORT OF THE SENIOR SCHOOL DENTIST.

In the activities of the School Dental Service during 1937 the outstanding event is the commencement of inspection and treatment for the pupils attending the secondary schools. It was anticipated that the rate of acceptance of the offer of treatment would be good, so we were prepared for a large number of patients, and this opinion was fully justified. Treatment is now in the course of completion at nearly all the schools, and everywhere the scheme has proved immediately popular. Usually a new service takes time to be appreciated and accepted freely by parents, but school dentistry in this department has got into its stride right away. Parents, Headmasters and Headmistresses are keenly appreciative, and in every school there has been evinced the desire to do all possible to make the scheme a success. The boys and girls have co-operated in a most justifying manner, and the introduction of this work into the routine of the School Dentists is as pleasing to the Staff as it is beneficial to this most important section of our school population.

What was not fully anticipated was the mass of dental defects that was awaiting us. Despite hard work on the part of the Staff, augmented by the appointment of Mr. Topping, the rate of getting through the long lists of patients has been slower than was hoped. An enormous amount of treatment has had to be done, but this first clearing up of an accumulation of trouble should leave us an easier task in subsequent years.

A notable appointment has been that of Miss Rasell as the first Dental Attendant and Receptionist. The increase of Staff has made the introduction of dental attendants a necessity to assist the dentists at clinics and inspections, and Miss Rasell has proved how very efficient and helpful a skilled attendant can be.

Work in the elementary schools has gone on steadily. That the treatment of the young child should be thorough and of the highest standard is a matter of paramount importance, and no effort is spared to ensure this. Free discussion of the difficulties of the work is made possible at quarterly staff meetings, and the pooling of experience is encouraged. Any new technique or material is discussed with the object of gaining the best from any modern advance.

I will venture to say that the Committee have greatly encouraged the Staff by their policy of providing modern clinic buildings with up-to-date equipment in all the larger centres of population. The principal of having well planned and well equipped treatment centres is essential to success in school dental work as poor premises and improvised equipment create an impression of inefficiency, whilst bright modern buildings, or for the villages an efficient caravan, containing modern equipment create an immediate impression of confidence, and most certainly give the dentist a dignity which the service deserves.

In thanking the Committee for their interest and support I would add that it is the aim of all the Dental Staff to gain for West Sussex the reputation of having a school dental service which will compare favourably with any in the country.

H. D. HALL,
Senior School Dentist.

April, 1938.

ORGANISATION OF PHYSICAL TRAINING DURING THE YEAR 1937.

REPORT BY THE ORGANISERS OF PHYSICAL TRAINING.

ORGANISING STAFF. The two full-time Organisers, Miss M. J. Croucher and Mr. L. P. E. Whitfield, B.A., who were appointed in September, 1936, have undertaken duties throughout the year. Their duties have included work in connection with Elementary Schools and Secondary Schools and pioneer work and supervisory work in connection with post-School Classes.

I. ELEMENTARY SCHOOLS.

(1) **Visits.** During the year 405 visits were made by the Organisers to Elementary Schools. Demonstration Classes were given at a number of Schools, and the facilities and equipment for Physical Training were carefully examined. Attention was also given to the suitability of desks and Infant furniture in the Schools from the point of view of posture.

The Organisers also attended the All-England Sports Meeting held at Brighton, the County Athletic Meeting at Eastbourne, and 17 School and District Athletic Meetings in the County

(2) **Results.** From their visits to Elementary Schools the Organisers are able to report that

(a) there has been a general improvement in the standard of teaching. The work done in the Easter Course for Teachers, to which reference is made later in this report was noticeably reflected in the work of the Schools ;

(b) a larger number of children in the Elementary Schools are now removing superfluous clothing for the Physical Training lesson and, in a number of Schools during the summer months boys do their Physical Training stripped to the waist ; the use of rubber shoes for Physical Training has extended during the year ;

(c) in many Schools the Teachers have noticed that the regular Physical Training and the drinking of milk daily have together much improved the physical and mental condition of the children.

(3) **Difficulties experienced.** The chief difficulties experienced have been those mentioned in the last Annual Report, viz. :

- (a) Lack of appropriate shoes and clothing.
- (b) Playgrounds of inadequate size and unsatisfactory surface.
- (c) Lack of indoor accommodation.
- (d) Lack of suitable playing fields.

Some progress has, however, been made towards removing these difficulties :

(a) Shoes and Clothing. Although the Education Committee have not during the year supplied shoes and clothing for Physical Training, progress has been made in many Schools where the co-operation of the parents has been obtained. There are, however, still many children using unsuitable footwear for Physical Training, but further progress along these lines is anticipated. As will be seen from paragraph (2) (b) above, progress has been made with regard to the removal of superfluous clothing for the Physical Training lesson, and some Schools have adopted a definite Physical Training uniform.

(b) Playgrounds. The County Council have, during the year, made grants towards the cost of improvements to the playgrounds of the following Non-Provided Schools ;—

Chichester Central C. E. Junior Girls'.
 Chidham Parochial.
 Cowfold C. E.
 Findon Parochial.
 Nyewood C. E.
 Old Shoreham C. E.
 Rogate C. E.
 Slindon C. E.

Provision has been made by the County Council in their Estimates for 1938-39 for further grants to be made, and it is hoped that there will be a steady improvement of defective playgrounds.

The reports of the Organisers on unsatisfactory playground surfaces, playgrounds in bad repair, etc., have resulted in some improvements being effected in a number of other Schools.

The problem of the playground of inadequate size is much more difficult to deal with but, wherever possible, the effective space for Physical Training has been enlarged by the removal of unnecessary fencing, etc.

(c) Indoor Accommodation. Further progress has been made in obtaining suitable indoor accommodation for Schools. Arrangements have been made for Halls to be hired for use by the following Schools :—

Clymping C. E.
 East Dean C. E.
 Southwick C. Junior Girls'.

Enquiries are being made by the Organisers with a view to other arrangements of this kind being made.

(d) Playing Fields. Every opportunity has been taken to encourage Managers of Non-Provided Schools to obtain playing fields for use by their Schools.

(4) **Upkeep of Playing Fields.** The upkeep of the Education Committee's playing fields has been carried out during the year by a mobile unit working under the direction of the Director of Agriculture. While securing the satisfactory maintenance of grounds, this scheme makes it necessary for local arrangements to be made for marking out playing fields, and some difficulty has been experienced in this direction.

A pavilion was erected during the year on the Chichester Playing Field, used by all Schools in the City. The pavilion includes shower baths in both the Boys' and Girls' changing rooms.

(5) **Athletics.** In connection with their attendance at Athletic Meetings, the Organisers have drawn special attention to such points as (a) the inclusion in the Programme only of suitable events ; (b) the length of the Programme ; (c) the necessity of preventing undue strain on the children.

(6) **Swimming.** It was only possible during the year to arrange for swimming instruction for Schools in the Horsham district and, although steady progress was maintained with this it was felt at the end of the season, by the Organisers and the teaching staff, that the time had arrived for further development. In view of this, an extended scheme for swimming at Horsham has been arranged for the 1938 season .

A number of enquiries were made by the Organisers with a view to extending instruction in swimming to other districts.

(7) **Gymnasia.** In the course of the year plans for new Senior Schools including Gymnasia were prepared, and it is anticipated that in future Senior Schools special provision of this kind will be made, together with the provision of changing rooms and shower baths.

II. SECONDARY SCHOOLS.

Visits were paid to all the Secondary Schools in the course of the year. The work in these Schools continues to be satisfactory. Extensions have been completed during the year at the High School for Boys, Chichester, and the High School for Girls, Worthing. At both Schools a new Gymnasium, changing rooms and shower baths have been built. This will allow for considerable extension of the work undertaken at these Schools.

III. TEACHERS' CLASSES.

(a) **Three-Day Course.** A Three-Day Course was held at Bishop Otter College, Chichester, from the 12th to 15th April, 1937. 256 Teachers attended the Course, where instruction was given by the Organisers with the assistance of Miss H. M. Naylor, Organiser of Physical Training for Reading Borough Education Committee, and Miss E. M. Jerram, Physical Training Lecturer to Darlington Training College. The Course was visited by H.M. Inspectors.

Daily Sessions, including practical and theoretical work, were held, dealing with the following aspects of Physical Education—Physical Training for the older children in all-age Mixed Schools ; Athletics ; Minor Games ; Infants' secondary lessons. Lectures on "Posture" and "Footwear" were given by Dr. J. L. Newman, Assistant County Medical Officer. Films covering a wide range of Physical Training subjects were shown during the Course.

(b) **Other Classes.** During the Autumn Term two Courses, one for Women Teachers and one for Men Teachers, were held in Worthing on one evening each week for 12 sessions. 51 Teachers (11 men and 40 women) from West Sussex and 73 Teachers (12 men and 61 women) from Worthing attended these courses. Instruction was given by the Organisers.

IV. RECREATIVE PHYSICAL TRAINING.

Considerable development has taken place in this work during the year. Every effort has been made to further the National Campaign for Recreative Physical Education, and extensive publicity was undertaken

(a) **Women's Classes.** Through the co-operation of the County Federation of Women's Institutes, 10 "Keep Fit" Classes were arranged in connection with Women's Institutes, and 7 other "Keep Fit" Classes for Women were arranged at convenient Centres. In addition, one Class was held in Greek Dancing and one Class in Gymnastics. 600 women were attending Classes during the Autumn Term, 1937.

Four Lecture-Demonstrations were given to Women's Institutes.

In July, West Sussex was represented at the Festival of Youth held at Wembley, some of the Leaders taking part in the work arranged by the Central Council for Recreative Physical Training and the National Council for Girls' Clubs.

(b) **Men's Classes.** Eight Men's "Keep Fit" Classes were held during the Autumn session at convenient Centres in the County. These classes were attended by 200 men. The Organiser also visited a number of Classes held in connection with Boys' Clubs and other voluntary organisations.

(c) **Training of Leaders.** Five Women Leaders attended Summer Courses on Recreative Physical Training and grants were made by the Committee to three of these Leaders. A considerable extension of arrangements for the training of Leaders is being undertaken in 1938 with a view to Leaders being available for "Keep Fit" Classes at all convenient Centres in the County.

During the year there has been a good response from the County to the Half-Day Courses run by the Central Council of Recreative Physical Training.

A considerable programme of Recreative Physical Training has been planned for the year 1938.

M. J. CROUCHER,
L. P. E. WHITFIELD,
Organisers of Physical Training.

May, 1938.